

What is claimed is:

1. An adhesive article comprising:
- (a) a liner having a first side and a second side; and
- 5 (b) an adhesive having a first surface and a second surface, wherein the second surface of the adhesive contacts the first side of the liner, wherein the article has been exposed to E-Beam radiation through the second side of the liner, and wherein the article has been rolled upon itself, causing the second side of the liner to come into contact with the first surface of the adhesive, and wherein the second side of the liner and
- 10 the first surface of the adhesive have a liner release value that is less than the liner release value of the first side of the liner to the second surface of the adhesive.

2. An adhesive article comprising:
- (a) a liner having a first side and a second side; and
- 15 (b) an adhesive having a first surface and a second surface, wherein the second surface of the adhesive contacts the first side of the liner, wherein the article has been exposed to E-Beam radiation through the second side of the liner, and wherein the article has been rolled upon itself, causing the second side of the liner to come into contact with the first surface of the adhesive, and wherein the liner release value of the
- 20 second side of the liner to the first surface of the adhesive and the liner release value of the first side of the liner to the second surface of the adhesive are sufficiently different to avoid liner confusion.

3. The adhesive article of claim 1, wherein said liner release value of the
- 25 second side of the liner to the first surface of the adhesive is less than about 110 g/cm

4. The adhesive article of claim 1, wherein said liner release value of the
- second side of the liner to the first surface of the adhesive is less than about 59 g/cm

- 30 5. The adhesive article of claim 1, wherein said liner release value of the
- second side of the liner to the first surface of the adhesive is less than about 39 g/cm

6. The adhesive article of claim 1, wherein said liner release value of the second side of the liner to the first surface of the adhesive is less than about 20 g/cm

5 7. The adhesive article of claim 1, wherein said liner release value of the second side of the liner to the first surface of the adhesive is less than about 12 g/cm

8. The adhesive article of claim 1 wherein said adhesive has a thickness of at least about 250 micrometers.

10 9. The adhesive article of claim 1 wherein said adhesive has a thickness of at least about 500 micrometers.

15 10. The adhesive article of claim 1 additionally comprising a pigment dispersed in the adhesive.

11. The adhesive article of claim 10, wherein said pigment is present in the adhesive at a concentration of greater than about 0.10% by weight.

20 12. The adhesive article of claim 10, wherein said pigment is present in the adhesive at a concentration of greater than about 0.15% by weight.

13. The adhesive article of claim 10, wherein said pigment is present in the adhesive at a concentration of greater than about 0.18% by weight.

25 14. The adhesive article of claim 1, wherein said adhesive comprises at least one (meth)acrylic polymer.

30 15. The adhesive article of claim 14, wherein said (meth)acrylic polymer is derived from 2-ethylhexyl acrylate and acrylic acid.

16. The adhesive article of claim 1, wherein the liner comprises a liner backing having a first and second side; and a release coating material on said second side.

17. The adhesive article of claim 16, wherein the release coating material comprises at least one compound chosen from: alkoxysilane compounds, acetoxysilane compounds, and silanol compounds.

18. The adhesive article of claim 17, wherein the release coating material comprises silanol-terminated polydimethylsiloxane.

19. The adhesive article of claim 16, wherein the release coating material comprises an epoxy silicone.

20. The adhesive article of claim 19, wherein the epoxy silicone comprises an epoxy silicone having an average degree of polymerization between crosslinks of less than about 12.

21. The adhesive article of claim 16, wherein the coating material is coated at a weight of at least about 0.7 g/m^2 .

22. An adhesive article comprising:

- (a) a liner backing having a first and second side;
- (b) an adhesive on a first side of the liner backing; and
- (c) a coating material on the second side of the liner backing, wherein said release coating material has a sufficiently tightly crosslinked network, levels of polar functionalities and reactive groups such that, upon liner backing exposure to E-Beam radiation to crosslink the adhesive, the liner release value of the second side of the liner backing to the adhesive is less than the liner release value of the first side of the liner backing to the adhesive.

23. An adhesive article comprising:

- (a) a liner backing having a first and second side;
- (b) an adhesive having a first surface and a second surface on a first side of the liner backing; and

(c) a release coating material on a second side of the liner backing, wherein said release coating material has a sufficiently tightly crosslinked network, levels of polar functionalities and reactive groups such that, upon liner backing exposure to E-Beam radiation to crosslink the adhesive, the liner release value of the second side of the liner to the first surface of the adhesive and the liner release value of the first side of the liner to the second surface of the adhesive are sufficiently different to avoid liner confusion.

24. The adhesive article of claim 22, wherein said release coating material comprises at least one compound chosen from: alkoxysilane compounds, acetoxysilane compounds, and silanol compounds.

25. The adhesive article of claim 24, wherein the release coating material comprises silanol-terminated polydimethylsiloxane.

26. The adhesive article of claim 22, wherein the release coating material is coated at a weight of at least about 0.7 g/m^2 .

27. The adhesive article of claim 22, wherein the release coating material comprises an epoxy silicone.

28. The adhesive article of claim 27, wherein the release coating material comprises an epoxy silicone having an average degree of polymerization between crosslinks of less than about 12.

29. The adhesive article of claim 22, wherein the liner backing is chosen from: polyester films, polyolefin films, metallized films, sealed papers, metallized papers, clay coated papers, and papers.

30. The adhesive article of claim 29, wherein said liner backing is chosen: polyester films or polyolefin films.

31. The adhesive article of claim 30, wherein said liner backing is a polyolefin film.

32. The adhesive article of claim 31, wherein said polyolefin film is a polyethylene film.

33. The adhesive article of claim 32, wherein said polyethylene film is a multilayered polyethylene film.

34. A method for preparing an adhesive article, said method comprising:
(a) applying a release coating material to a second side of a liner backing;
(b) applying an adhesive to a first side of said coated liner backing;
(c) crosslinking said adhesive with E-Beam radiation applied through the second side of said liner backing;
wherein the liner release value of the second side of the coated liner backing to the adhesive is less than the liner release value of the first side of the coated liner backing to the adhesive.

35. The method of claim 34, additionally comprising applying a release coating material to the first side of the liner backing.

36. The method of claim 34, additionally comprising winding said article into a roll.

37. The method of claim 34, wherein said liner backing is chosen from: polyester films, polyolefin films, metallized films, sealed papers, metallized papers, clay coated papers, and papers.

38. The method of claim 37, wherein said liner backing is chosen from: polyester films or polyolefin films.

39. The method of claim 38, wherein said liner backing is a polyolefin film.

40. The method of claim 39, wherein said polyolefin film is a polyethylene film.

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41. The method of claim 40, wherein said polyethylene film is a multilayered polyethylene film.

42. The method of claim 34, wherein said release coating material comprises at least one compound chosen from: alkoxysilane compounds, acetoxysilane compounds, and silanol compounds.

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43. The method of claim 42, wherein the release coating material comprises silanol-terminated polydimethylsiloxane.

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44. The method of claim 34, wherein said release coating material comprises an epoxy silicone.

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45. The method of claim 44, wherein said epoxy silicone comprises an epoxy silicone having an average degree of polymerization of less than about 12.

46. The method of claim 34, wherein the release coating material is formed at a weight of at least about 0.7 g/m².

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47. The method of claim 34, wherein said release coating material has a sufficiently tightly crosslinked network, levels of polar functionalities and reactive groups such that, upon liner backing exposure to E-Beam radiation to crosslink the adhesive, the liner release value of the second side of the coated liner backing to the adhesive is less than the liner release value of the first side of the coated liner backing to the adhesive.

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48. The method of claim 34, wherein said release coating material has a sufficiently tightly crosslinked network, levels of polar functionalities and reactive groups such that, upon liner backing exposure to E-Beam radiation to crosslink the adhesive, the liner release value of the second side of the liner to the first surface of the adhesive and the liner release value of the first side of the liner to the second surface of the adhesive are sufficiently different to avoid liner confusion.

49. The method of claim 34, wherein said E-Beam radiation is at a dosage of from about 5 to 10 Mrads.

50. The method of claim 34, wherein said E-Beam radiation is at a dosage of from about 5 to 7 Mrads.

51. The method of claim 34, wherein said E-Beam radiation is carried out in an atmosphere of less than about 100 ppm oxygen.

52. The method of claim 34, wherein said E-Beam radiation is carried out in an atmosphere of less than 10 ppm oxygen.

53. The method of claim 34, wherein said E-Beam radiation is carried out in an atmosphere of less than about 2.5 ppm oxygen.

54. A liner with a first and second side, for use in an adhesive tape product, wherein an adhesive is applied to the first side of the liner; the liner is coated on the second side with a release coating material, wherein the release coating material has a sufficiently tightly crosslinked network, levels of polar functionalities and reactive groups such that, upon liner backing exposure to E-Beam radiation to crosslink the adhesive, the liner release value of the second side of the coated liner backing to the adhesive is less than the liner release value of the first side of the coated liner backing to the adhesive; and the liner is to be treated with E-Beam radiation through the second side of the liner.

55. A liner with a first and second side, for use in an adhesive tape product, wherein an adhesive having a first and second surface is applied to the first side of the liner; the liner is coated with a release coating material, wherein the release coating material has a sufficiently tightly crosslinked network, levels of polar functionalities and reactive groups such that, upon exposure to E-Beam radiation through the liner backing to crosslink the adhesive, and the liner release value of the second side of the liner to the first surface of the adhesive and the liner release value of the first side of the liner to the second surface of the adhesive are sufficiently different to avoid liner confusion.

56. A method of improving release properties of an adhesive liner upon treatment with through liner E-Beam radiation for crosslinking an adhesive coated on a first side of a liner backing, comprising: coating a second side of a liner backing with a release coating material having a sufficiently tightly crosslinked network, levels of polar functionalities and reactive groups such that, upon treatment with E-Beam radiation through the liner backing to crosslink the adhesive, the liner release value of the second side of the liner backing to the adhesive is less than the liner release value of the first side of the liner backing to the adhesive.

57. A method of improving release properties of an adhesive liner upon treatment with through liner E-Beam radiation for crosslinking an adhesive coated on a first side of a liner backing, comprising: coating a second side of the liner backing with a release coating material having a sufficiently tightly crosslinked network, levels of polar functionalities and reactive groups such that, upon treatment with E-Beam radiation through the liner backing to crosslink the adhesive, the liner release value of the second side of the liner to the first surface of the adhesive and the liner release value of the first side of the liner to the second surface of the adhesive are sufficiently different to avoid liner confusion.

58. An article comprising:
(a) a liner backing having a first side and a second side; and

(b) an adhesive having a first surface and a second surface, wherein the second surface of the adhesive contacts the first side of the liner backing, wherein the article has been treated with E-Beam radiation through the second side of the liner backing, and wherein the liner backing has a liner release value to the adhesive at the second side of less than about 110 g/cm.

59. The article of claim 58, wherein said liner release value at the second side is less than about 59 g/cm.

60. The article of claim 58, wherein said liner release value at the second side is less than about 39 g/cm.

61. The article of claim 58, wherein said liner release value at the second side is less than about 20 g/cm.

62. The article of claim 58, wherein said liner release value at the second side is less than about 12 g/cm.

63. An adhesive article comprising:

- (a) a first liner having a first side and a second side; and
- (b) a second liner having a release coating on at least one side; and
- (c) an adhesive having a first surface and a second surface, wherein the second surface of the adhesive contacts the first side of the first liner, and the first surface of the adhesive contacts the release coating of the second liner

wherein the article has been exposed on both sides to E-Beam radiation through the first and second liners.

64. The adhesive article of claim 63, wherein said adhesive has a thickness of at least about 250 micrometers.

65. The adhesive article of claim 63 wherein said adhesive has a thickness of at least about 500 micrometers.

5 66. The adhesive article of claim 63 further wherein said second liner has been removed.

67. A method for preparing an adhesive article, said method comprising:

(a) applying release coating material to at least a second side of a first liner backing;

10 (b) applying release coating material to at least one side of a second liner backing;

(c) applying an adhesive onto a first side of said coated first liner backing;

(d) applying the coated side of said second liner to the exposed surface of the adhesive;

15 (e) crosslinking said adhesive with E-Beam radiation applied to both sides of the adhesive through said first and second liner backings.

68. The method of claim 67 wherein said adhesive has a thickness of at least about 500 micrometers.

20 69. The method of claim 67, additionally comprising

(f) removing the second coated liner backing thereby exposing the adhesive; and

(g) winding said article into a roll,

25 wherein the article has been rolled upon itself causing the second side of the first liner to come into contact with the exposed surface of the adhesive and wherein the liner release value of the second side of the first liner to the adhesive and the liner release value of the first side of the first liner to the adhesive are sufficiently different to avoid liner confusion.

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